

REMARKS/ARGUMENTS

The Applicant appreciates the Examiner's thorough review of the present application, and respectfully requests reconsideration in light of the foregoing amendments and the following remarks.

In summary, claims 3, 13, and 16-18 have been canceled and claims 1, 2, 4, 12, 14 and 15 amended. Applicant's responses to the issues raised in the Office Action are set forth in the following.

Claim Rejections under 35 U.S.C. §102

The Examiner rejected claims 1, 3, 4, 12 and 13 under 35 U.S.C. §102(b) as being anticipated by Kim et al (U.S. Patent No. 6,214,430). This rejection is respectfully traversed. Claim 1 is amended to further include the limitation set forth in claim 3, which is canceled. Similarly, claim 12 is amended to further include the limitation set forth in claim 13, which is canceled. Claim 4 is also amended to include the same limitation. Thus, the optical disk substrate in amended claims 1, 4 and 12 is limited to being formed by applying injection molding method so that the disclosure in Kim et al can be patentably distinguished. As will be explained below, Kim et al does not disclose each and every feature specified in amended claims 1, 4 and 12.

The Examiner states that the reference discloses an optical recording medium comprising a substrate having a clamping area thereon where the clamping area has a reinforcing member attached thereto so that the clamping area has a thickness greater than the outer periphery of the substrate, including the area where the recording layer is formed. The substrate is formed by injection molding.

Applicant respectfully traverses these conclusions, particularly in view of the amendments. The Examiner did not specifically point out which embodiment in Kim et al corresponds to such an optical recording medium. In fact, none of the embodiments possesses every feature of the optical disc substrate set forth in amended claims 1, 4 and 12:

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Fig. 6 of Kim et al shows a disc recording medium with a reinforcing member 12, which must be bonded to the disc 10 in order to generate a residual stress, which is crucial in that patent. Therefore, the reinforcing member 12 and the disc 10 can not be made in one piece by applying injection molding method, as it is claimed in amended claims 1, 4 and 12. Thus this embodiment of the reference does not anticipate amended claims 1, 4 and 12.

Fig. 8 of Kim et al shows a second embodiment, in which a reinforcing member 22 is attached to the outer periphery of the recording region 20B, which has a clamping region 20A positioned at the inner circumference of the recording region 20B. Although the clamping region 20A may be formed to have twice the thickness of the recording region 20B (see column 6, lines 10-12), there was no discussion as to how the clamping region 20A is formed with the recording region 20B or whether they are formed in one piece – certainly there is no indication that they are formed by applying injection molding. Moreover, the disk substrate in this embodiment of Kim et al has a nonrecording region 20C (attached to the reinforcing member 22), whereas in the present invention there is no such nonrecording region and the information storing area is located on top of the second upper surface of the second annular area.

As yet another embodiment, Kim et al discloses a disc molding apparatus which molds disc recording medium by injection molding method. (Figs. 14-16; column 7, line 57 to column 8, line 30.) However, the disc recording medium produced by this apparatus is different from what the Examiner has stated. The disc recording medium of this embodiment has its substrate and reinforcing member formed as one piece in which the thickness is the same throughout the disc recording medium. Namely, the disc molding apparatus of Kim et al does not produce disc recording medium with greater thickness in the clamping area than the outer periphery of the substrate. Each of amended independent claims 1, 4 and 12 requires the disk substrate (including the clamping area) to be fabricated by applying injection molding, and the first upper surface area of the disk substrate is to be higher than the second upper surface area of the disk substrate. Hence Kim et al does not disclose each and every feature specified in claims 1, 4 and 12.

In short, Kim et al's invention relies on combining different parts of the substrate having different thermal expansive coefficients or undergoing different heating/cooling steps for the purpose of generating a residual stress acting as a tensile force. As a result, forming the substrate in one piece by applying injection molding method is contradictory to the central inventive idea of Kim et al.

Accordingly, each of claims 1, 4 and 12 is not anticipated by Kim et al and therefore patentable under 35 U.S.C. §102(b) over Kim et al.

Claim Rejections under 35 U.S.C. §103

The Examiner rejected claims 5-8 and 14-18 under 35 U.S.C. §103(a) as being unpatentable over Kim et al (U.S. Patent No. 6,214,430) in view of recording materials well known in the art. Applicant respectfully requests reconsideration of the rejection of claims 5-8, 14 and 15. Each of claims 5-8 ultimately depends from independent claim 4, and each of amended claims 14 and 15 depends from independent claim 12. Applicant respectfully submits that the reference in view of recording materials well known in the art neither anticipates the present invention set forth in amended claims 4 and 12 nor suggests to one having ordinary skill in the art the subject matter defined therein. Therefore, amended claims 4 and 12 remain patentable over Kim et al despite the status of recording materials in the art. Accordingly, for at least this reason, claims 5-8, 14 and 15 are patentable by virtue of being dependent from patentable claims 4 and 12.

Allowable Subject Matter

According to Examiner, claims 2 and 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As discussed above, claim 1 has been amended to further include the limitation set forth in claim 3 and should now be patentable. Therefore, claim 2 with only minor amendments should also be patentable as dependent upon

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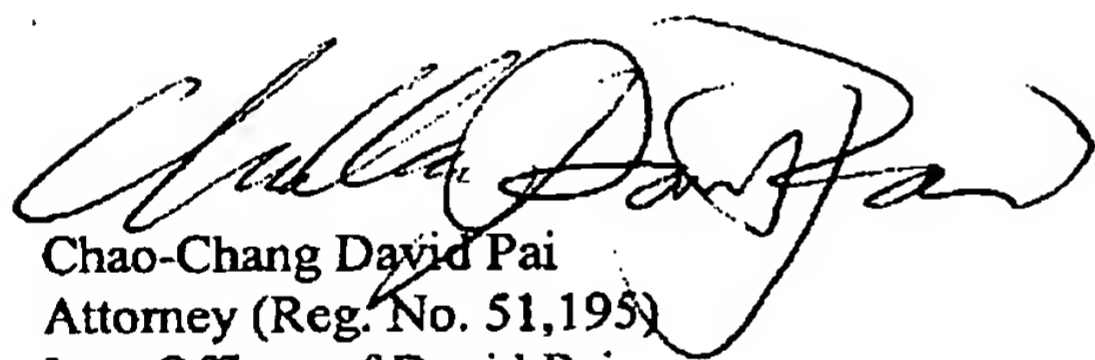
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amended claim 1. Separately, claim 2 should remain patentable regardless of whether amended claim 1 is patentable - if it is written in independent form, as indicated by the Examiner.

Claim 9 is already in independent form, and since claims 10 and 11 are dependent upon claim 9, no amendment is needed to comply with Examiner's requirement to overcome the objection. Therefore, claims 9-11 are patentable as originally written.

In view of the foregoing amendments and remarks, the Applicant respectfully submits that all of the pending claims are in condition for allowance and accordingly requests that the Examiner reconsider the rejections and allow all the pending claims.

Respectfully submitted:



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